

Atty Docket No.: JCLA5185

Serial No.: 09/417,985

REMARKS**Present Status of the Application**

The Office Action mailed June 21, 2002, rejected claims 1, 6-8, 13 and 14, and objected to claims 2-5 and 9-12. Specifically, the Office Action rejected claims 1, 6-8, 13 and 14 under 35 U.S.C. 102, as being anticipated by Hashimoto (U.S. Pat. Application Publication 2002/0012453). Applicants have amended claims 1 and 8 above to more specify the scope of the invention. Applicants respectfully submit that no matter is added by way of these amendments. As amended, these claims clearly distinguish over prior art, and therefore overcome the rejections under 35 U.S.C. 102. After entry of the foregoing amendments, claims 1-14 remain pending in the present application, and reconsideration of those claims is respectfully requested.

Summary of the Invention

The invention provides a method and user interface for use on a computer system coupled with a scanner for performing a scan operation on an original document, which allows the user to acquire scanned images in an easier and more user-friendly manner. The method allows the user to scan an original document without requiring the user to have learned knowledge background in the science of image processing, and also allows the scanner to perform only one scan operation on the original document. These features allow the use of the scanner to be easier and more user-friendly than the prior art. By the method, the first step is to determine a set of image processing settings by a scanner driving program that are suited for optimal scan of the original document; and then the scanner is activated to perform a scan operation on the original document

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based on the image processing settings to thereby obtain a primitive scanned image. Next, an image-enhancement process is performed on the primitive scanned image to thereby obtain a quality-enhanced image; and finally, the quality-enhanced image is transferred to the application program for use by the application program.

Discussion of Office Action Rejections

Claims 1, 6-8, 13 and 14 were rejected under 35 U.S.C. 102(e), as being anticipated by Hashimoto. The Office Action stated that Hashimoto has disclosed all features as claimed in the present invention. In response, Applicants respectfully disagree the rejection and the interpretations for at least reasons set forth below.

Hshimoto discloses a network scanner/printer system, in which all computers (hosts) connected to the network can access a shared scanner/printer. The network server SP1's communication program 83 can receive a scan command C1 from the host computer ST 1 to activate a scanning process. The image can be partitioned into two or more bands, These respective band image data will be stored in the band memory F.

When the image of one band is written into the band memory, the device driver 86 informs the control program 85 of completion of scanning. The, an image processing is carried out to compress the image data of one band in the band memory by using the JPEG board G (see paragraph [0323]). Therefore, the image processing process is performed after each image of one band. Then, this compressed image data is transmitted back to the host computer ST1.

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This image processing is to compress the scanned image data, so that the image data is suitable to be transmitted through the network.

In contrast, according to the present invention, the invention focuses on that after the original document is scanned, the scanner driver will automatically perform an image-enhancement image, such as the automatic cutting, distortion correction, color calibration, and automatic character recognition. This image-enhancement image is not merely a compressing process as disclosed in the Hashimoto reference.

In addition, it should be noted that the scanned image is enhanced first according to the image processing settings at the beginning of the scanning process. Then, the enhanced image is directly transmitted to the application program, so that the user can use the scanner in a more easy way without leaning the complicated image-enhancement technology.

The requisite features are recited in the independent claims 1 and 8, which are set forth immediately below:

1. (Once Amended) A method implemented on a user interface incorporated in a computer system coupled with a scanner for performing a scan operation on an original document, the computer system running a scanner driver and an application program; the method comprising the steps of:
 - determining a set of image processing settings required for the original document by a scanner driving program;
 - obtaining a primitive scanned image in a manner that the scanner uses image processing settings through the scanner driving program;
 - performing an image-enhancement process on the primitive scanned image;
 - and
 - obtaining a final image by the image-enhancement process, wherein the final image is transferred to the application program.

(Emphasis added). Also independent claim 8 recites.

8. (Once Amended) A user interface for a scanner, comprising:

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a scanner , for scanning an original document to an image data;
a computer system, for storing and processing the image data from the scanner;
a scanner driving program, for driving the scanner and then performing an image-enhancement process on the image data stored in the computer system;
an application program, for receiving a final image processed by the image-enhancement process, wherein a method implemented on the user interface comprising the steps of:
determining a set of image processing settings required for the original document by a scanner driving program;
obtaining a primitive scanned image in a manner that the scanner uses image processing settings through the scanner driving program;
performing an image-enhancement process on the primitive scanned image;
and
obtaining a final image by the image-enhancement process, wherein the final image is transferred to the application program.

(Emphasis added). Applicant respectfully submits that independent claims 1 and 8 patently define over the prior art for at least the reason that the prior art fails to adequately disclose those features emphasized above.

In addition, according to Hashimoto, the image to be scanned is partitioned into two or more bands, and the image processing is performed after each image data of one band is written into the band memory F. However, in this invention, the image-enhancement process is automatically processed to the whole image data after the entire image is scanned according to the received set of image processing settings. In this way, the user does not need to know the complete settings for obtaining a high quality image.

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Namely, the present invention can scan an original document without requiring the user to have background of image processing, and also allows the scanner to perform only one scan operation on the original document.

In the Hashimoto reference, because the scanner is shared by many host computers, and is only used for scanning a document. The scanner only scan the document to obtain the image data of bands, compresses the image data of each band, and then transmits all image data back to the host computer that issues a scanning request. As for the image-enhancement, it might be done at each host computer according to its own demand.

Therefore, for at least the reasons set out above, the present invention clearly distinguishes over the Hashimoto reference. Applicants respectfully submit that independent claims 1 and 8 patently define over the Hashimoto, and the dependent claims 2-7 and 9-14 patent define over Hashimoto for the same reasons.

The prior art made of record, but not relied upon, is not deemed to affect the patentability of the presently claimed invention.

CONCLUSION

For at least the foregoing reasons, it is believe that all pending claims 1, 3-8 and 10-14 are in proper condition for allowance. If the Examiner believes that a conference would be of value in expediting the prosecution of this application, he is hereby invited to telephone the undersigned counsel to arrange for such a conference.

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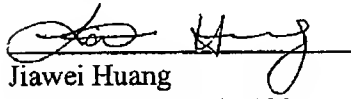
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Date: 9/20/2002

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VERSION WITH MARKINGS TO SHOW CHANGES MADE**In The Claims:**

Claims 1 and 8 have been amended as follows:

1. (Once Amended) A method implemented on a user interface incorporated in a computer system coupled with a scanner for performing a scan operation on an original document, the computer system running a scanner driver and an application program; the method comprising the steps of:

determining a set of image processing settings required for the original document by a scanner driving program [that are suited for optimal scan of the original document];

obtaining a primitive scanned image in a manner that the scanner uses image processing settings through the scanner driving program;

performing an image-enhancement process on the primitive scanned image; and

obtaining a final image by the image-enhancement process, wherein the final image is transferred to the application program.

[activating the scanner to perform a scan operation on the original document based on the image processing settings to thereby obtain a primitive scanned image which is then transferred to the scanner driver;

activating the scanner driver to perform an image-enhancement process on the primitive scanned image to thereby obtain a quality-enhanced image; and

transferring the quality-enhanced image to the application program for use by the application program.]

8. (Once Amended) A user interface for a scanner, [incorporated in a computer system coupled with a scanner for performing a scan operation on an original document, the computer system running a scanner driver and an application program; the method comprising the steps of:], comprising:

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a scanner , for scanning an original document to an image data;
a computer system, for storing and processing the image data from the scanner;
a scanner driving program, for driving the scanner and then performing an image-enhancement process on the image data stored in the computer system;
an application program, for receiving a final image processed by the image-enhancement process, wherein a method implemented on the user interface comprising the steps of:
determining a set of image processing settings required for the original document by a scanner driving program;
obtaining a primitive scanned image in a manner that the scanner uses image processing settings through the scanner driving program;
performing an image-enhancement process on the primitive scanned image; and
obtaining a final image by the image-enhancement process, wherein the final image is transferred to the application program.

[means for determining a set of image processing settings by a scanner driving program that are suited for optimal scan of the original document;

means for activating the scanner to perform a scan operation on the original document based on the image processing settings to thereby obtain a primitive scanned image which is then transferred to the scanner driver;

means for activating the scanner driver to perform an image-enhancement process on the primitive scanned image to thereby obtain a quality-enhanced image; and

mean for transferring the quality-enhanced image to the application program for use by the application program.]